

*Commissioner for Patents
Amendment dated July 29, 2005
Response to Office Action dated March 1, 2005
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*Serial No.: 09/965009
Art Unit: 2142
Examiner: Hollar
Docket No. AUS9 2001 0429 US1*

Amendments to the Drawings:

The attached sheet of drawings includes changes to FIG. 1. This sheet 1 (of 4), replaces the original sheet 1 (of 4). As shown on the attached Annotated Sheet Showing Changes, reference numerals 200 and 214, which were not referred to in the specification as filed, have been deleted. No other changes have been made.

Attachments:

*Replacement Sheet
Annotated Sheet Showing Changes*

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REMARKS/ARGUMENTS

Claims 1-26 were pending and examined. The Examiner indicated objections to the drawings, and to claims 10 and 19. The Examiner rejected claims 1, 10, and 19 under 35 USC § 102(e), as being anticipated by Dutta (U.S. Patent No. 6,658,462), hereinafter "Dutta". Claims 1-5, 10-14, and 19-23 were rejected under 35 USC § 102(e), as being anticipated by Lin *et al.* (U.S. Patent No. 6,405,256), hereinafter "Lin". The Examiner rejected claims 6, 15, and 24 under 35 USC § 103(a) as being unpatentable over Lin in view of Bishop *et al.* (U.S. Patent No. 5,539,895), hereinafter "Bishop". Claims 9 and 18 were rejected under 35 USC § 103(a) as being unpatentable over Lin in view of Price (U.S. Patent No. 6,766,376), hereinafter "Price". Claims 7-8, 16-17, and 25-26 were rejected under 35 USC § 103(a) as being unpatentable over Lin in view of Bishop, and further in view of Walrand.

Drawing Objections

The Office Action required correction because of FIG 1 because reference numerals 200 and 214 shown in FIG. 1 were not mentioned in the specification. Applicant has submitted a proposed replacement drawing sheet for FIG. 1 and an annotated sheet showing changes in which reference numerals 200 and 214 have been deleted. Applicant believes that FIG. 1 of the proposed replacement drawing sheet complies with the requirements of 37 CFR 1.84 and Applicant respectfully requests the Examiner to enter the proposed replacement drawing sheet and withdraw the objection. The Examiner also objected to FIG. 4 for including reference numeral 410 not mentioned in the specification. In response to this objection, Applicant has amended the specification as indicated above to include a reference numeral 410 in the appropriate passage. Applicant believes that this amendment to the specification obviates the drawing objection and Applicant therefore requests the Examiner to withdraw the object to FIG. 4.

Claim Objections

The Office Action indicated an objection to informalities in claims 10 and 19 as filed. In response, Applicant has amended claim 10 to provide antecedent basis for "the file" and "the

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clerk." Applicant has amended claim 19 to provide antecedent basis for "the file." Applicant wishes to thank the Examiner for identifying these objections. Applicant submits that claims 10 and 19 as amended addresses the objections raised by the Examiner and Applicant would respectfully request the Examiner to reconsider and withdraw the objection.

Claim rejections under 35 USC § 102(e)

The Examiner rejected independent claims 1, 10, and 19 under Section 102(e) as being anticipated by Dutta. In addition, the Examiner rejected the independent claims under Section 102(e) as being anticipated by Lin. In response, Applicant has amended the independent claims to recite that the invention includes retrieving the first fragment of a file from volatile storage of a server and retrieving a subsequent fragment of the file from disk storage of the server. Support for these amendments is found in the specification (see, e.g., paragraph beginning page 5, line; paragraph beginning page 7, line 5 (reference numeral 124); paragraph beginning page 8, line 10 (reference numeral 406); and paragraph beginning page 8, line 19 (reference numeral 408)).

The limitations of the independent claims as amended are not anticipated by the cited references because the cited references do not explicitly or inherently describe a file server configuration in which a first part of a file is stored in the server's volatile storage while a second part of the file is stored in the server's disk storage. The amended claims explicitly recite an "intra-server" file caching hierarchy in which a distinction is made between a server's fast (volatile) storage and the disk storage of the same server. An anticipation rejection is appropriate only when the cited reference discloses either explicitly or inherently all of the claim limitations.

Neither Dutta nor Lin disclose the intra-server hierarchy recited in the amended claims. Both Dutta and Lin describe inter-server hierarchies in which proxy servers that are architecturally relatively close to a client provide low response (fast) storage and an originating server provides higher response (slower) storage. In both references, first portions of a file are stored in the proxy server while remaining portions are stored in the originating server. This multi-server characteristic is evident in FIG 1 of Dutta and FIG 1 of Lin. Moreover, although Lin does refer to a case in which an entire file is downloaded to a single caching server (column 7 lines 5-12), the disclosure does not explicitly or inherently describe a configuration in which a

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first fragment of the file is stored in volatile storage and the second fragment is stored in disk storage. Lin says only that this single caching server stores the data segments in an expandable buffer "utilizing, for example, both disk memory and RAM...depending on the size of the data file." The mere disclosure of a server containing RAM and disk storage and storing a file in one or both of these resources does not anticipate claim limitations explicitly reciting that the first fragment of a file is stored in the volatile storage while a second fragment is stored in the disk (i.e., it is neither explicit nor inherent in Lin that the first fragment is stored in RAM and the second fragment is stored in disk storage).

Because the limitations of the amended independent claims are not anticipated by either of the cited references, Applicant respectfully requests the Examiner to reconsider and withdraw the anticipation rejections of the amended independent claims and all pending depending claims.

In addition to the foregoing, Applicant has amended claims 7, 16, and 25 to recite limiting the size of the first fragment (the fragment stored in volatile storage) based on the size and number of active packets permitted by a TCP/IP connection between the server and the client. Support for these amendments is found in the specification, for example, at the paragraph beginning on page 5, line 28 and the paragraph beginning page 7, line 21.

The claims under discussion recite limitations not taught or suggested by the cited references. The Examiner rejected the original claims as obvious over Lin in view of Walrand and correctly acknowledges that Lin does not disclose where the fragment size is related to a window size of the transmission connection. The Examiner relied on Walrand to provide this limitation. Walrand indicates that one may send any number of packets and then determine a time period based on the chosen number of packets and the transmission time of a packet. Walrand further teaches that the user can then assume a problem has occurred if acknowledgement of the first packet is not received in the determined time period. Although Walrand uses "window" terminology in its description, the Walrand window is not the same as the TCP/IP type of window and the claims under discussion have been amended to clarify the distinction between Walrand's windows and the claimed fragment size limitation. The amended claims recite a relationship between the size of the fragments stored in volatile storage and the maximum packet size permitted by a network connection over which the server must

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communicate. There is nothing in Walrand that suggests the its "window" size is limited by the network connection. To the contrary, Walrand suggests that the number of packets sent in a single burst can be increased without limit if one is merely willing to delay receipt of an acknowledgement. The amended claims recite explicitly that an embodiment that recognizes the benefit of limiting the fragment size to maximum packet size that may be transmitted over the network connection. These limitations of claims 7, 16, and 25 are further refined in amended dependent claims 8, 17, and 26, which recite the specific formula for determining the maximum size of a fragment in compliance with limitations imposed by the network protocol. These limitations are neither taught nor suggested by the cited references. Because these limitations are neither taught nor suggested by the cited references, Applicant respectfully requests the Examiner to reconsider and withdraw the rejections of these dependent claims.

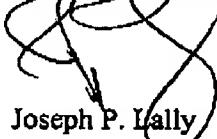
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CONCLUSION

In the present response, Applicant has addressed the objections to the drawings and claims, and responded to the Examiner's claim rejections under 35 USC § 102(e), and 35 USC § 103(a). Accordingly, Applicant believes that this response constitutes a complete response to each of the issues raised in the office action. In light of the amendments made herein and the accompanying remarks, Applicant believes that the pending claims are in condition for allowance. Accordingly, Applicant would request the Examiner to withdraw the rejections, allow the pending claims, and advance the application to issue. If the Examiner has any questions, comments, or suggestions, the undersigned attorney would welcome and encourage a telephone conference at 512.428.9872.

Respectfully submitted,


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Attachments

Applicant: Bohrer et al.
Docket AUS20010429US1
ANNOTATED SHEET SHOWING CHANGES FOR Sheet 1 of 4
Contact: J. Lally 612.428.9870

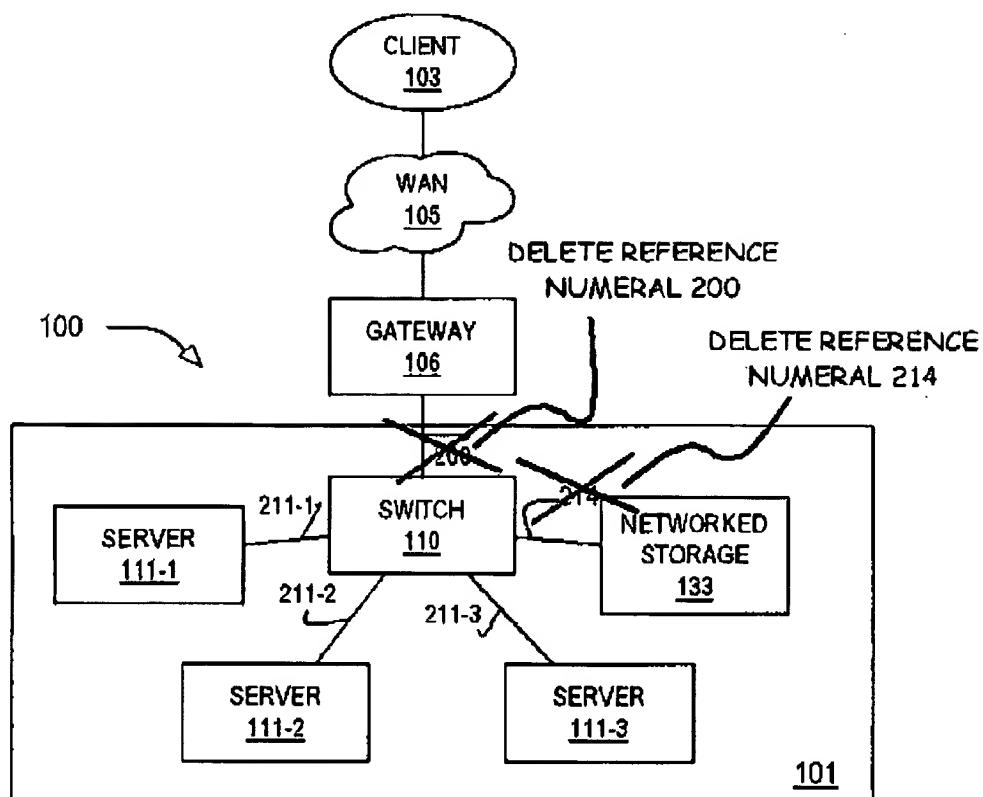


FIG. 1